National Institute of Environmental Health Sciences

Aeromycology--Main research fields of interest during the last 25 years

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Abstract:

Fungal spores occur very numerously in the air and, on account of their dimensions (several micrometers), are classed as bioaerosols. They are always observed in natural air and their concentration changes depending on environmental conditions. Aeromycology investigates their occurrence in the air of the indoor-outdoor environment. The methods of sampling can be divided into the gravimetric method when the spores fall onto a catching surface by force of gravity, and the volumetric method consisting of analysis of spores contained in a given air unit. The content of fungal spores in air is characterized by a specific seasonal and diurnal cycle. Among other things, these cycles depend on climate and weather conditions, on the accessibility of fresh substrates for the development of the fungus, circadian cycle of light and darkness, and other environmental hardly definable factors. Many fungi undesirably affect human health, cause immunotoxic diseases, and are a frequent cause of allergic diseases. Knowledge of concentrations of airborne fungal spores is especially important for agricultural and occupational medicine. Aeromycology has its application in agrobiology, particularly with respect to pathogenic fungi, and in the conservation of the artistic heritage.

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Indoor Environment, Meteorological Factors, Temperature

Air Pollution: Allergens, Interaction with Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

Dermatological Effect, Respiratory Effect

Respiratory Effect: Upper Respiratory Allergy

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified